



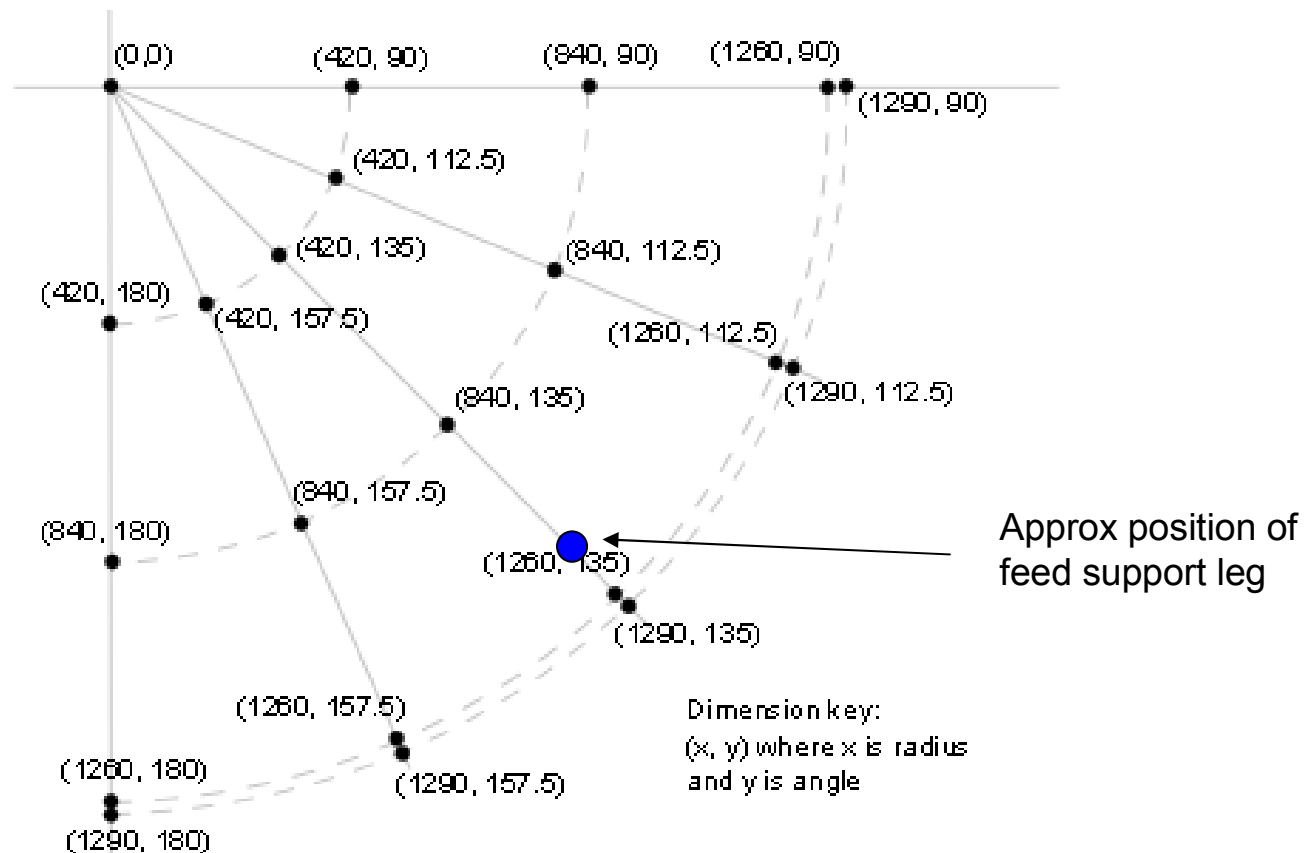
Small Dish Measurements

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Introduction

- How good was the CP from my RWST feed?
- View across surface of the dish
- System had feed alone, with no choke ring

Measurement Points



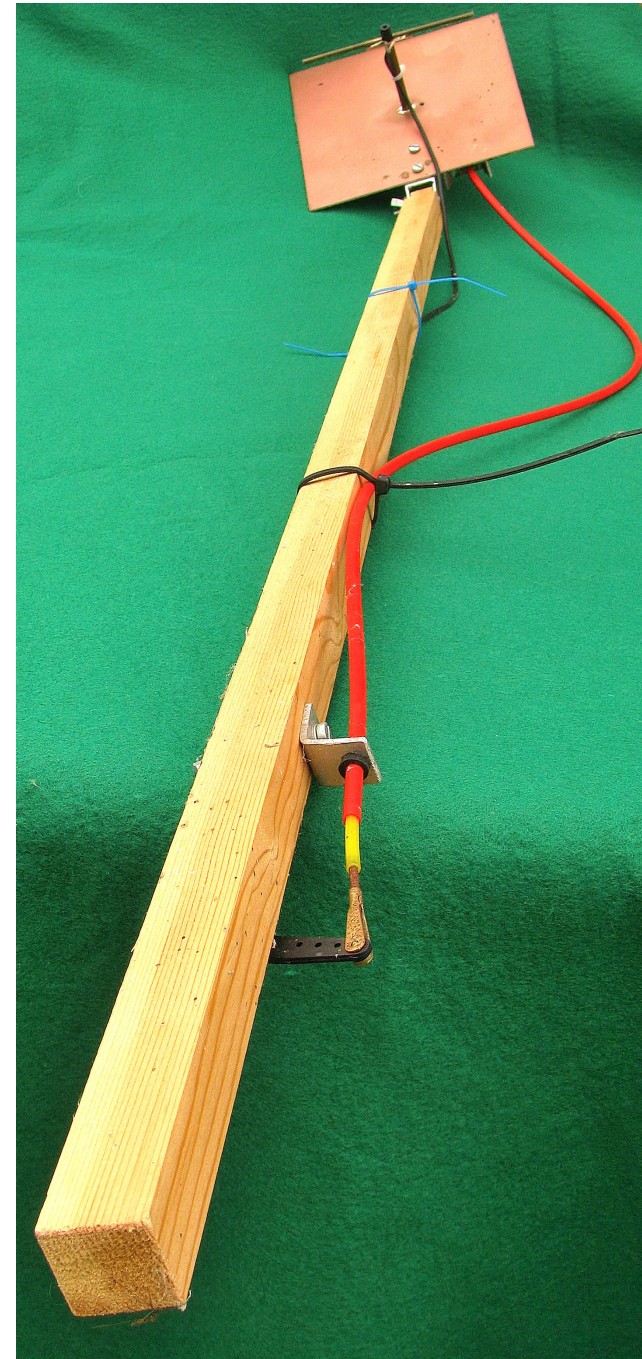
Assumed that all four quadrants
would behave similarly

Measurement Probe

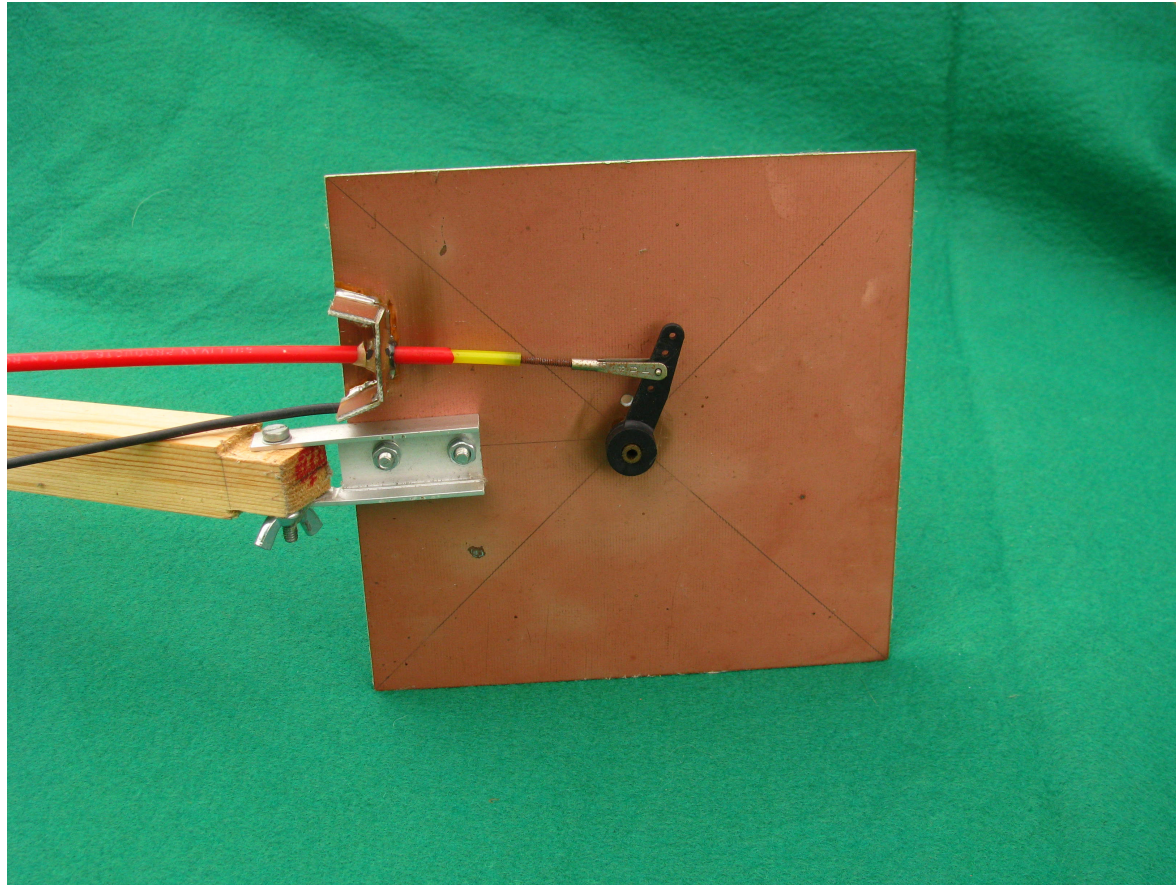
- Lightweight, handheld
- Rotatable for V and H
- Simple construction
- Remote control
- Reflector to give consistency

Probe view

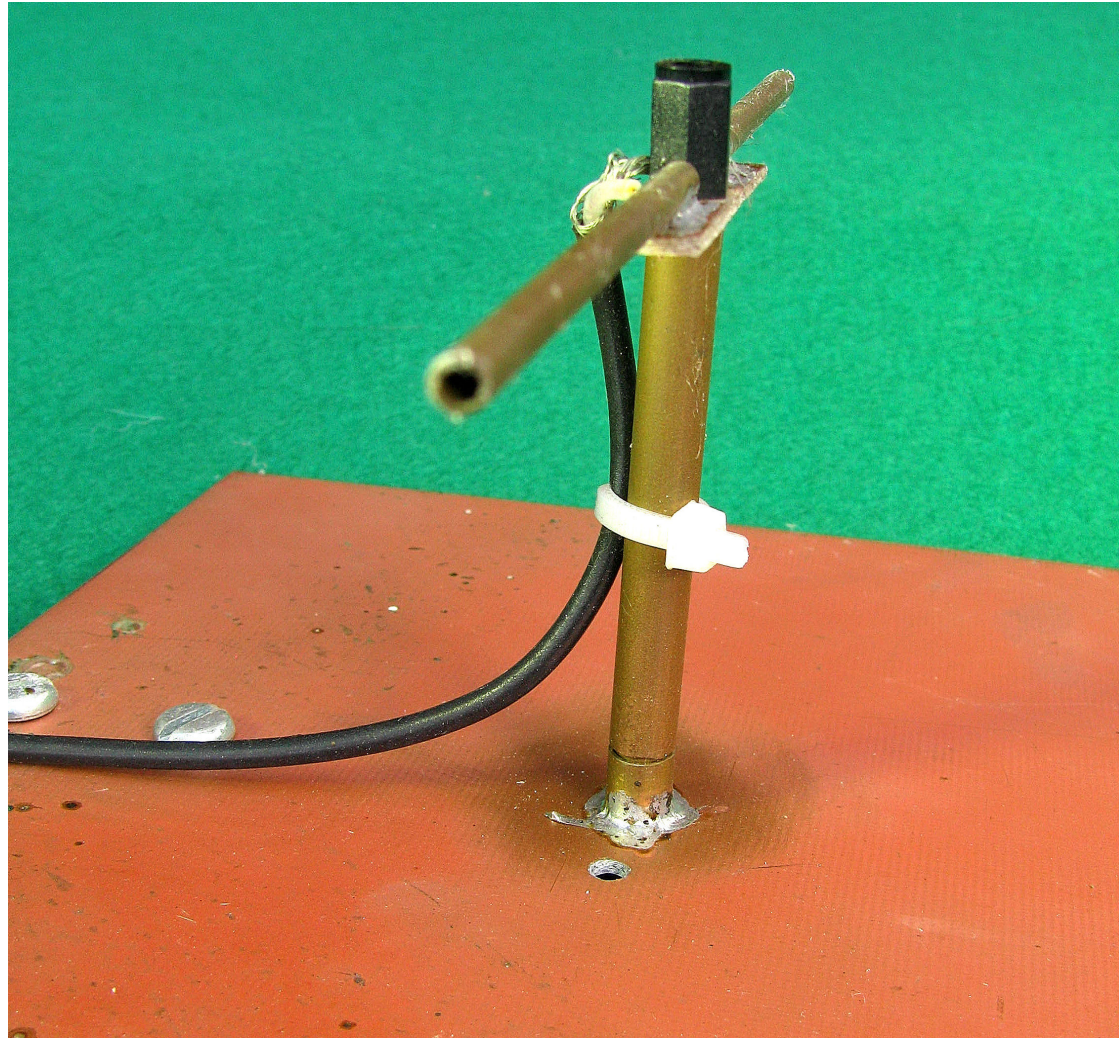
- 1m handle
- Bellcrank rotation control
- PCB reflector



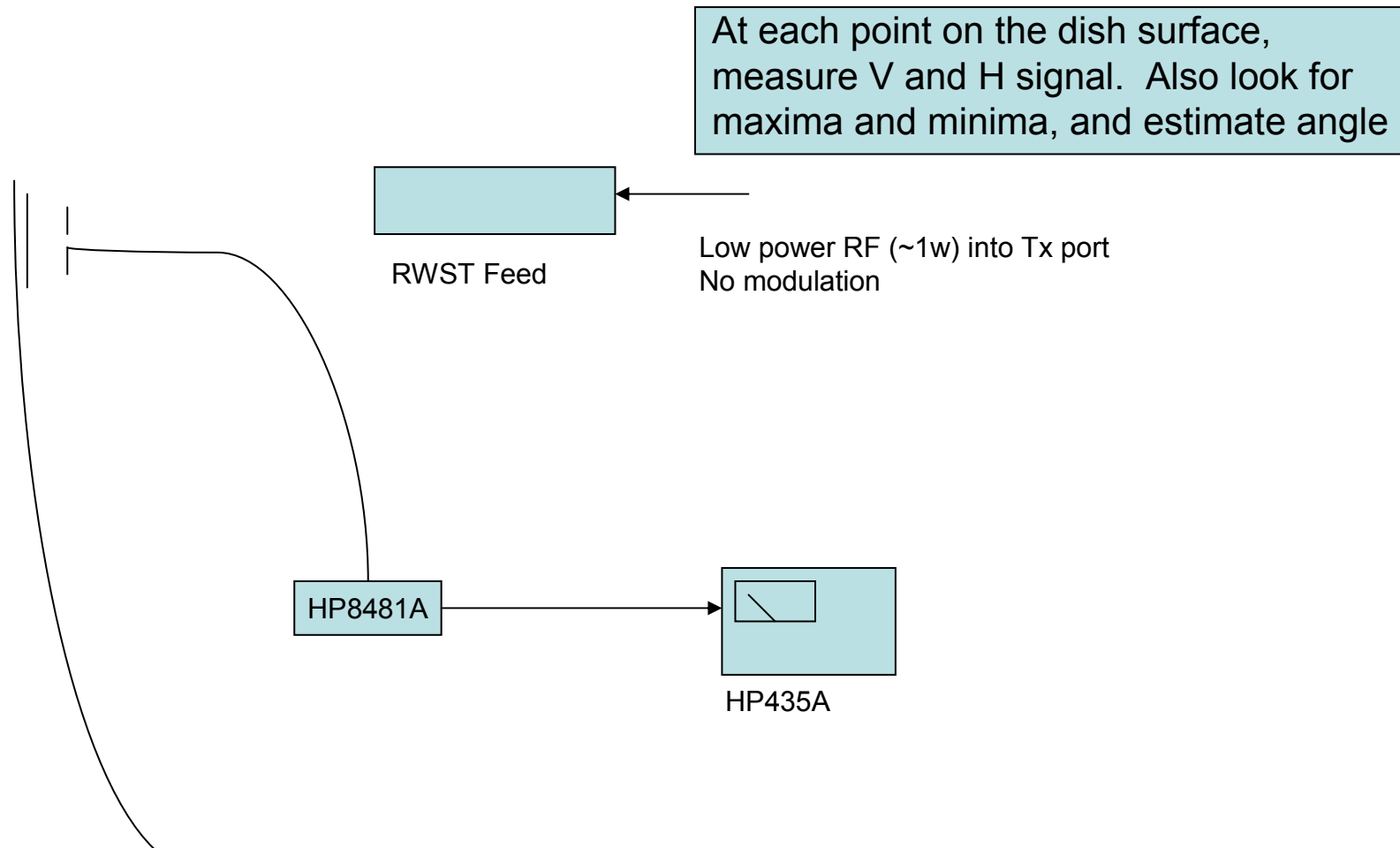
Probe view – operating mechanism



Probe view - dipole



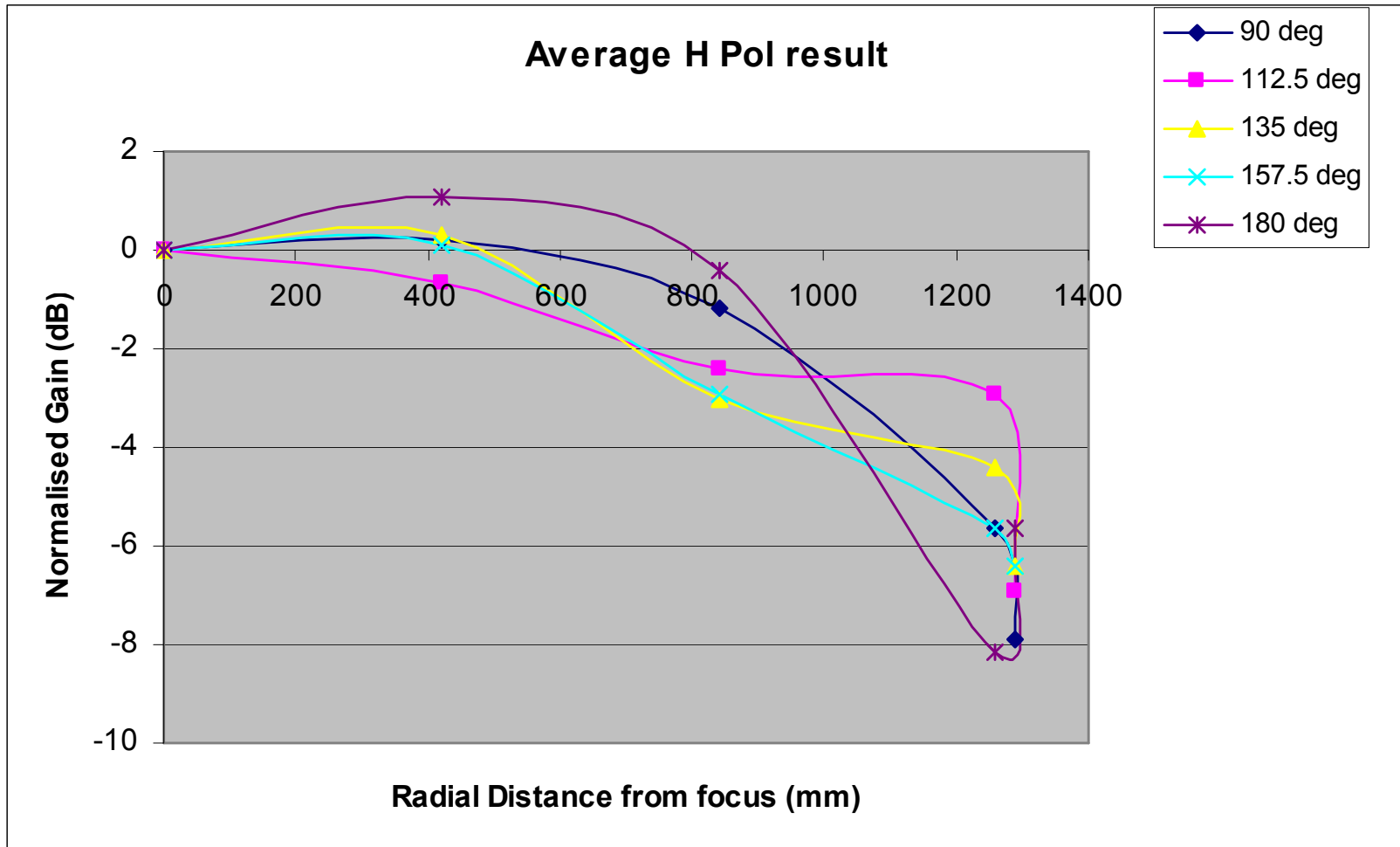
Measurement System



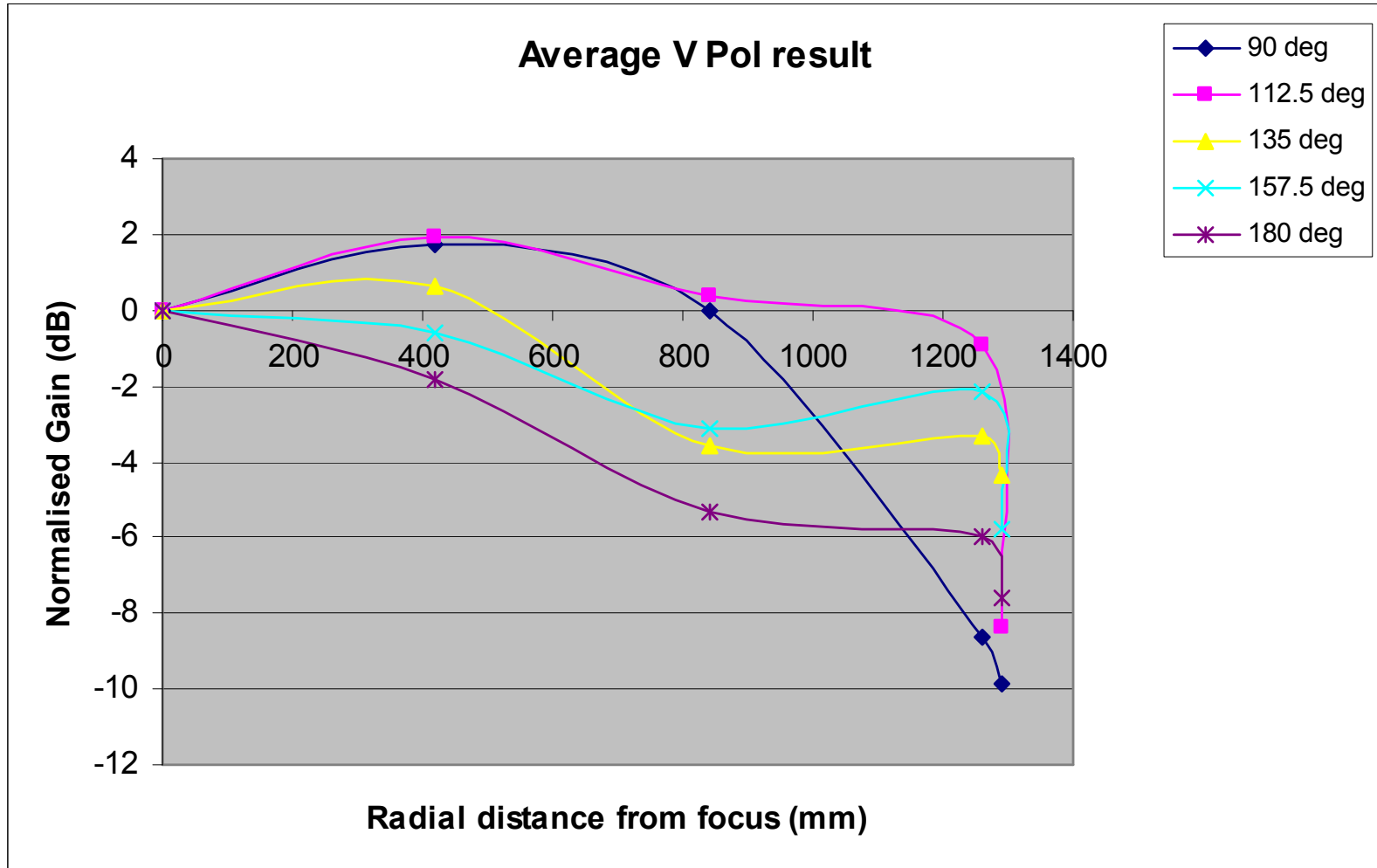
Expectations!

- H and V signals equal in amplitude on ordinates
- -10dB signal level at dish rim

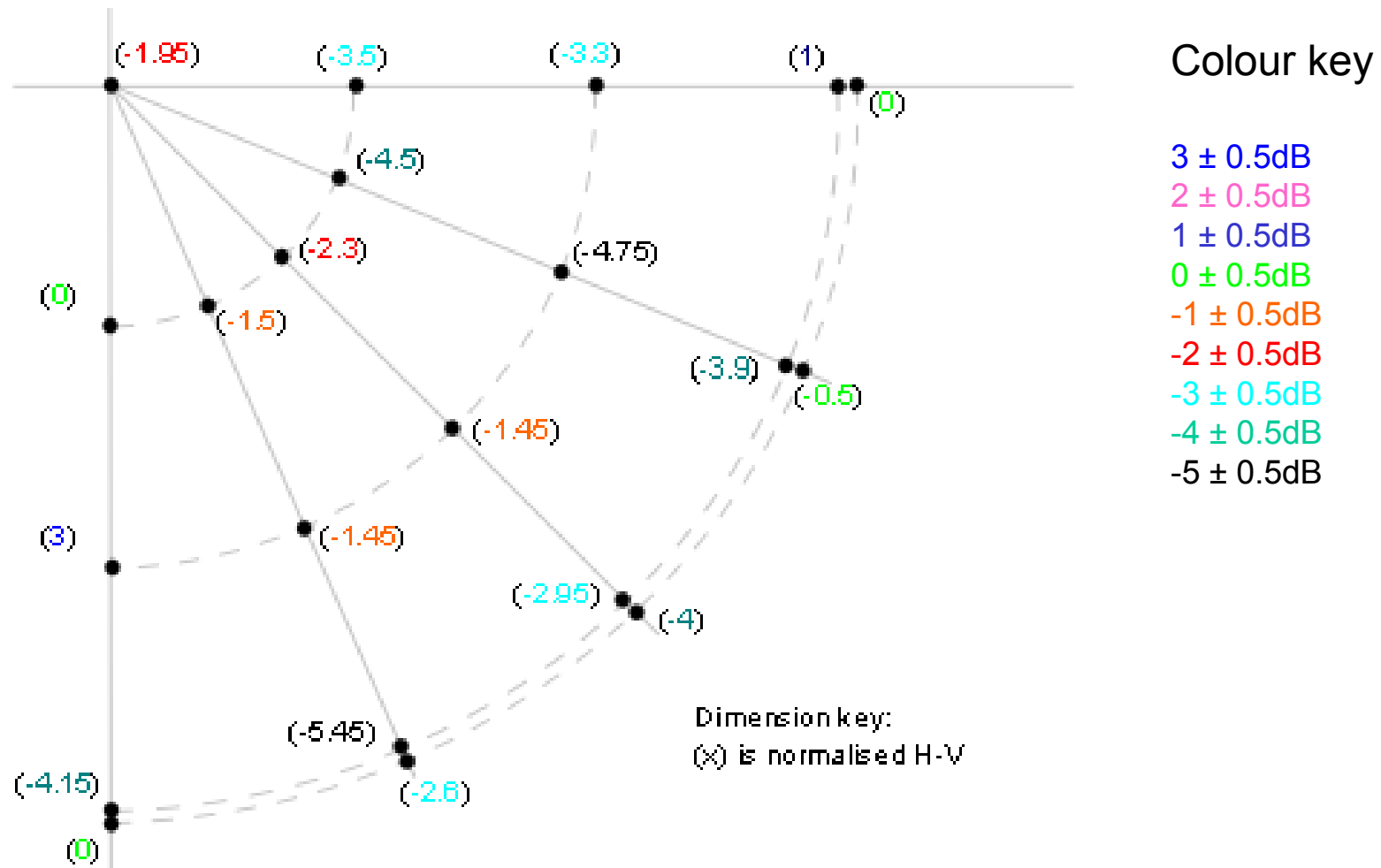
Results - H



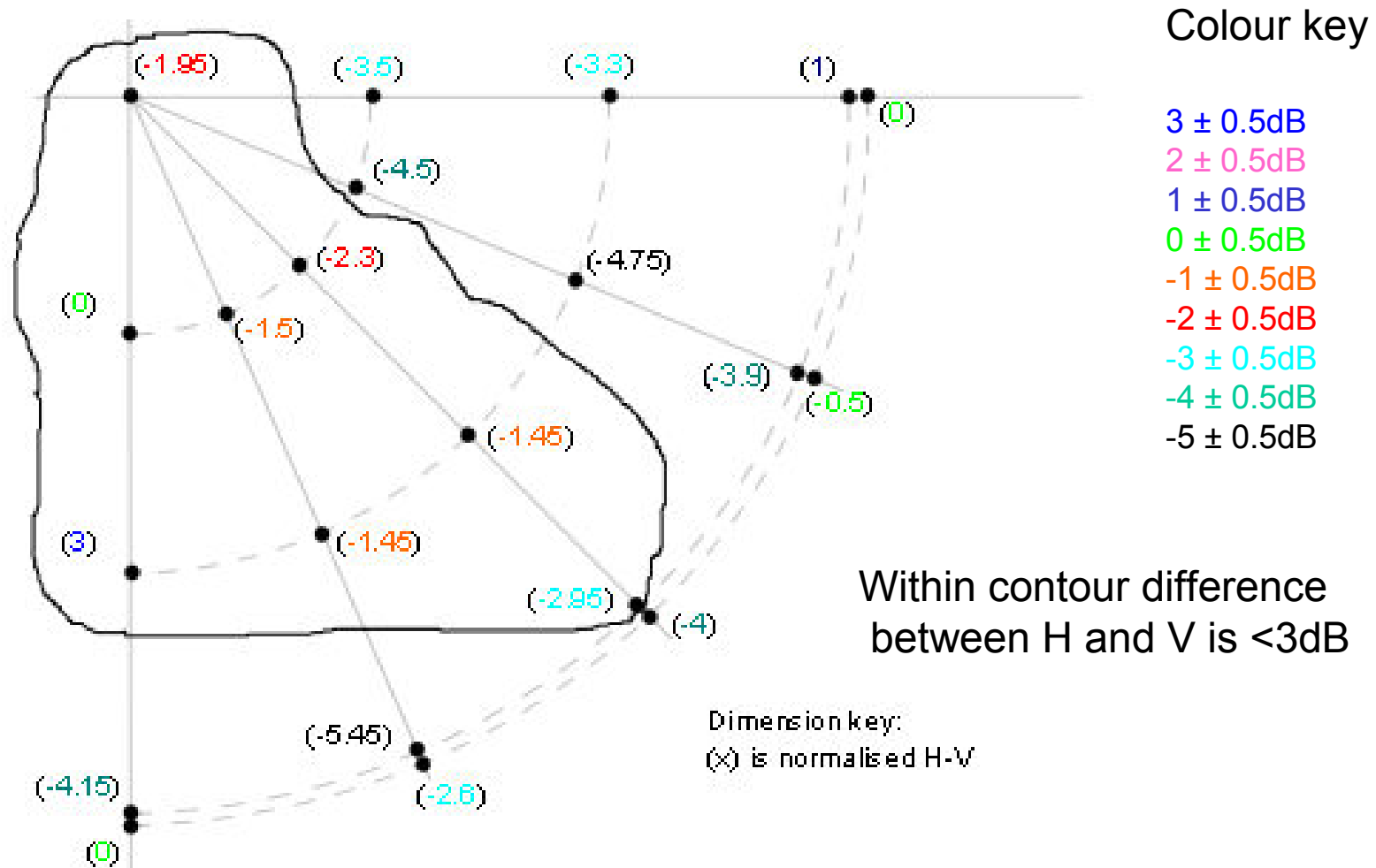
Results - V



Average 'circularity' results



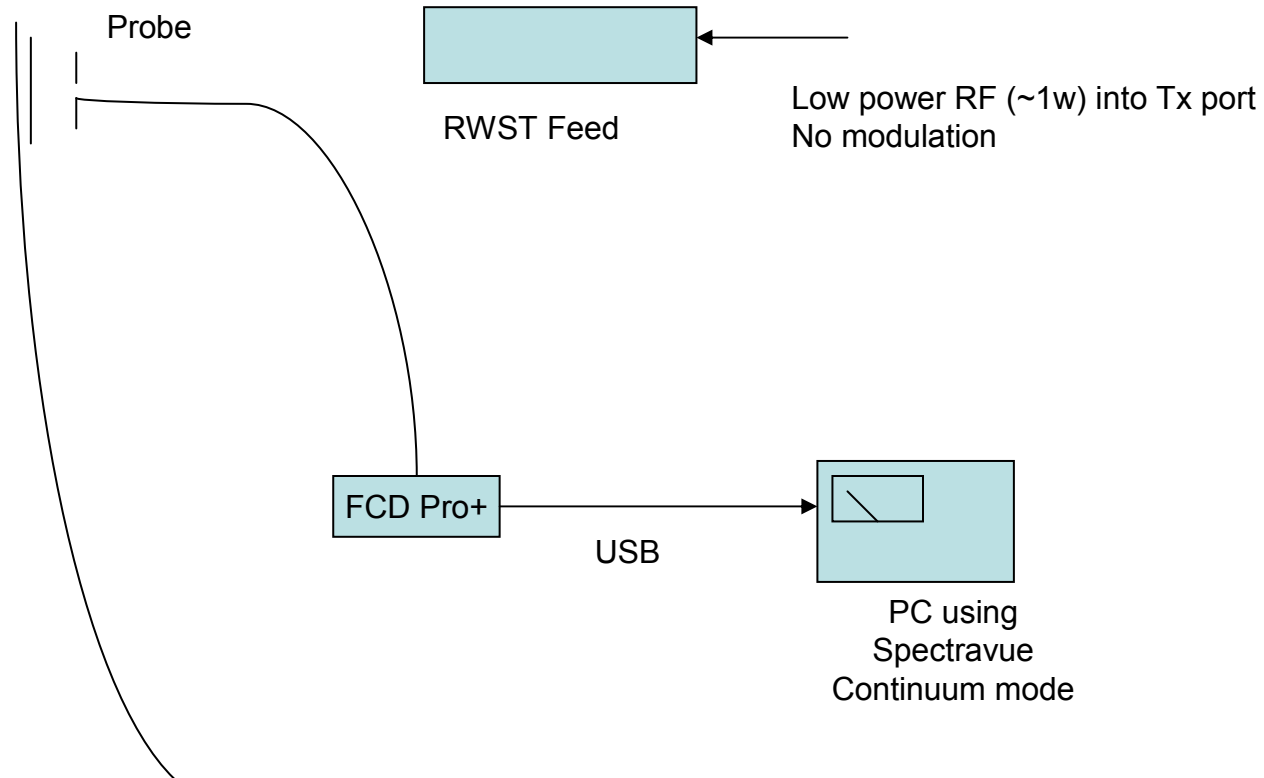
Average 'circularity' results



Maxima and Minima

- Very subjective measurement
- Generally 90° apart on observation
- Orientation progressed round quadrant

Improved Method



Conclusions

- The process was educational!
- No consistency was observed, but biggest variation was on the corner of the RWST
- Not possible on these tests to eliminate feed support influences, but poor circularity at top of quadrant likely to be due to reflections from support
- Dish was not well illuminated!